

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning on page 6, line 12 and ending on page 6, line 17 with the following amended paragraph marked up to show changes made relative to the immediate prior version:

The operand sz corresponds to a control register and carries operand polarity register (OPR--reference numeral 214, FIG. 2) and operand select register (OSR--reference numeral 216) bits. When the data to be decoded is at rate $1/2$, one bit each of OPR and OSR is needed for each butterfly operation. When the data to be decoded is at rate $1/3$, two bits each of OPR and OSR are needed for each butterfly operation. When the data to be decoded is at rate $1/4$, three bits each of OPR and OSR are needed for each butterfly operation.

Please replace the paragraph beginning on page 9, line 25 and ending on page 10, line 4 with the following amended paragraph marked up to show changes made relative to the immediate prior version:

When Viterbi decoding is performed in the channel decoder 110, the ACS engine 204 (FIG. 2) performs eight 16-bit butterfly operations per cycle. This is true for each of rates $1/2$, $1/3$ and $1/4$. Each of the eight butterfly operations is handled by a respective one of the eight ACS units 206. Each butterfly operation takes as inputs two state metrics, two or four 16-bit branch metrics, one bit to determine branch polarity (OPR) and one or two bits to select the appropriate branch metric (OSR). The butterfly operation includes computation of two new state metrics and two bits of trace-back information. Results of adding portions of the butterfly operation are compared and the minimum result is chosen as the surviving path[[.]], indicated by the trace-back information.